

Remarks

Claims 22-31 are at issue. Claims 22-31 stand rejected under 35 USC § 103 (a), as being unpatentable over Naik et al. (5548647) in view of Higgins (5339385) and further in view of Mammone (5590242)

The Examiner states that Mammone teaches a technique for establishing decisions using multiple test utterance and multiple train utterance. The applicants agree that this is true, however he does not suggest using preliminary decisions. Clearly the data fusion logic 40 does not combine preliminary decisions. None of the references cited by the Examiner suggests using preliminary (true/false) decisions and then non-parametrically combining these decisions. They all suggest a parametric (adding up the individual scores) method of determining a score and then comparing the score to a threshold. This means that a poor (great) score in part of the utterances can overly weight the score. This is one of the problems using preliminary decisions solves. For instance, if the test utterances were “5,4,3”. The total combined score could be below a threshold and therefore the person considered an imposter using any combination of the techniques suggested by the prior art. While the present invention might have preliminary decisions of true for the word “5” and true for the word “4” but false for the word “3”. The present invention might concluded that it was a true speaker, the prior art reference might conclude it was an imposter because the score for the word “3” was so low that it outweighed the scores for the words “4” & “5”. This advantage is clearly not shown in the prior art.

Claim 22 specifically requires the decisions to be either a true or a false. Mammone does not teach the use of “preliminary decisions that are either true or false. Mammone states that “from the fused classified output a decision is made.” (Col. 2-3, lines 67 & 1) There is no discussion of preliminary true/false decisions. Mammone specifically suggests using two classifiers 1) dynamic time warping for providing validation of the spoken password and 2) modified neural tree network classifier for providing discrimination from other users. None of this discusses making preliminary decisions. Claims 22, 29, 30 and 31 are allowable.

Claim 23 requires weighting each preliminary decision. Averaging cannot be considered weighting decisions. Averaging does not imply a decision it implies a raw unevaluated score. There is no suggestion in Juang et al to weight or combine the preliminary decisions. Combining Naik et al with Juang et al does not teach or suggest to one skilled in the art to weight preliminary decisions. In fact, Juang et al teaches away from the present technique. Claim 23 is allowable over the prior art.

Claims 24 requires using a historical probability of false alarm. This not discussed in the prior art. The section pointed to by the Examiner does discuss the probability of false alarms. But it clearly does not discuss the use of historical probability of false alarms. Claim 24 is clearly allowable over the prior art.

Claim 25 requires evaluating the quality of a preliminary decision. The section pointed to by the Examiner measures the test template against the reference template.

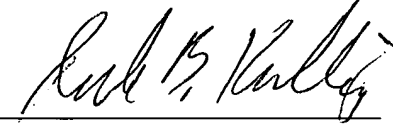
This does not tell you the quality of the preliminary decision. If the two are not close, and it's a true speaker the quality is poor but this is not reflected in this comparison. Clearly, the section pointed to by the Examiner does not cover the limitation of this claim. Claim 25 is allowable over the prior art.

Claims 26, 27 & 28 are allowable as being dependent upon an allowable base claim.

Prompt reconsideration and allowance of the application are respectfully requested.

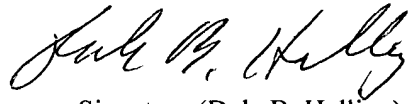
Respectfully submitted,

(Bossemeyer, Jr. et al.)

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I hereby certify that a Response is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, P.O. Box 1450, Alexandria, VA 22313-1450, on:

2/21/04
Date


Signature (Dale B. Halling)